

XII.—*Notes on a collection of Reptiles and Frogs from the neighbourhood of Ellore and Dumagudem.*—By W. T. BLANFORD, F. R. S., &c.

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In the year 1871 I was engaged for some months in the Godávári valley near the first barrier, and in the country between Dumagudem and Ellore. Dumagudem is the station where the Engineers, engaged on the works connected with the first barrier, used to live.

The country is herpetologically but poorly known, and the following list of the species noticed may therefore be an addition to geographical distribution. Nearly the whole tract is covered with thin forest, and the soil is very sandy.

A portion of the collection made has been lost or mislaid, and cannot now be found. The list appended is doubtless very imperfect; several common forms, such as *Naja tripudians*, *Ptyas mucosus*, *Dendrophis picta*, *Lycodon aulicus*, &c., not being included, although they undoubtedly occur. The collection was made in the driest months of the year, from February to May, and the list of lizards is consequently, in all probability, much more nearly complete than that of snakes or *Batrachia*.

REPTILIA.

CHELONIA.

1. TESTUDO ELEGANS.
2. PANGSHURA TECTA var. INTERMEDIA, J. A. S. B., XXXIX, 1870, Pt. 2, p. 339. The Godávári form is similar to that found in the Mahánadí. The natives, who eat several kinds of freshwater tortoise, will not feed on this species, as they say it makes them ill.

3. BATAGUR ELLIOTTI? Godávári river.

The only specimen obtained was about 6 inches long. The head was dusky brown with 4 broad blackish indistinct longitudinal bands on the nape and back of the neck. Legs dusky grey. Claws pale yellowish.

4. TRIONYX sp.? Godávári. My specimens are not now available for comparison, but Dr. Anderson tells me he believes the species to be *T. leithi*. It is probable that more than one species are found in the Godávári. The only specimens of *Trionyx* obtained by me were young individuals. They were olive in colour with 4 ocelli on the back, white beneath, nape ferruginous with violet streaks. Tubercles on the carapace rather large.

Some individuals of *Trionyx* or one of the allied genera grow to an enormous size. I was assured that a freshwater turtle 6 feet long was caught in the Godávári by the Captain of one of the river steamers. I cannot answer for

the accuracy of the measurement; a foot or two may have been thrown in. But I once saw, on the Indus, a very large individual belonging to some species of the *Trionycidæ* basking on a sandbank. I was on a steamboat, and the turtle took refuge in the water before the vessel was sufficiently near to enable his dimensions to be accurately estimated, but my impression was, that the carapace could not have been much less than 5 feet long, and it might well have been more.

5. *EMYDA VITTATA*. One specimen was obtained on the 13th March in forest, far from water. This individual probably came from a tank that had dried up. Other specimens were procured from the Godávári river. None exceeded about 5 inches in length, and in all, the odd osseous plate in the middle of the sternum was concealed, if present. I did not, however, macerate or dissect a specimen, and I have none remaining now to examine.

CROCODILIA.

6. *CROCODILUS* sp. I do not know what is the species common in the Godávári, as I never had an opportunity of identifying a specimen. It is by no means improbable that more than one species occur in the river.

The Gharial is not found in the Godávári, nor, so far as I know, in any of the rivers of the Peninsula further South; nor is it found in the Nerbudda or Tapti. It is common, however, in the Mahánadi of Raipur, Sambalpur and Orissa.

LACERTILIA.

7. *VARANUS LUNATUS*. I twice obtained specimens of this monitor, or at least of a species which I believe to be *V. lunatus*,* in the country north of Ellore. The largest, a male, measured 23·5 inches, of which the tail from the anus was 14·5. There were about 110 cross rows of scales from the gula fold to the loin. The following is a description of the fresh colouration. Above brownish olive, with irregular cross rows of minute whitish spots on the back, passing into ill-marked cross bands behind. Tail dark near tip, the anterior portion somewhat irregularly spotted with dusky. Limbs finely dotted with yellow, the spots on the hind limbs surrounded with dusky. Lower parts irregularly mottled with yellow and pinkish brown. There is a tendency to ocellation on the side behind the shoulder. The dark colour of the upper parts passes gradually into the paler tints of the lower. Iris yellow, pupil circular. The reversed V-shaped dark cross bands, on the neck, supposed to be characteristic of *V. lunatus*, were not observed. This species is purely terrestrial, so far as my observations go, and lives in holes at the roots of trees, and in similar places far from water. It is diurnal in its habits.

* See following paper on Ajmere Reptiles.

8. *CABRITA LESCHENAUTII*, (J. A. S. B., XXXIX, 1870, Pt. 2, p. 345). Not rare in the dry forests on the Godávári. I find I was in error after all in supposing that *C. leschenaultii* and *C. brunnea*, are distinct; (see Günther P. Z. S., 1875, p. 225, and some notes by myself, P. Z. S., 1876, p. 635).

Up to April the only individuals I observed were adults, but in that month I found great numbers of young. These are coloured much like the adult, but the tints are brighter, and the distal portion of the tail is light orange, the head shields are quite smooth, not corrugated as in older individuals, and there were two post-nasals in all the specimens I examined under 3 inches in length. Afterwards, in May, I obtained many rather more grown, from $3\frac{1}{2}$ to $4\frac{1}{2}$ inches long, with but one post-nasal. As I was moving about, and procured specimens from different localities, this distinction may have been local and not due to age, but it is evident that the character of having one or two post-nasals is of no specific importance. The same variation is found in the nearly allied genus *Ophiops*.

The rugosity of the head plates appears to be a generic character of *Cabrita*.

9. *CABRITA JERDONI*, (Beddome, Mad. Monthly Jour. Med. Sci., January 1870, p. 34; Günther, P. Z. S., 1875, p. 225; W. Blanford, J. A. S. B., 1870, Pt. 2, p. 348; P. Z. S., 1876, p. 635). Dr. Günther supposed that this was the same as *Ophiops jerdoni*, but, on my sending him a specimen of the *Cabrita*, he saw, of course, that the two were quite distinct, and that he had been misled by an erroneous label.

C. jerdoni is common in the forests on the Godávári, more so I think than *C. leschenaultii*. I did not meet with *Ophiops microlepis*; it appears to be a northern and western form. (P. A. S. B., 1872, pp. 72, 74.)

10. *EUPREPES (Tiliqua) CARINATUS*.

11. *EUPREPES (Tiliqua) MACULARIUS*. (J. A. S. B., 1870, Pt. 2, p. 358; Stoliczka, J. A. S. B., 1872, Pt. 2, p. 117; P. A. S. B., 1872, p. 75.) As indicated by myself and much more clearly shewn by Dr. Stoliczka, there are two well marked varieties of this scinque, so well marked, indeed, that it is almost a question whether they should not be distinguished. The one is more slender, and more uniformly coloured above and on the sides, the other is stouter, with the posterior part of the dorsal surface distinctly spotted with black and the sides punctulated with white. In the former there are, as a rule, seven keels on each of the dorsal scales, on the latter five. The former is true *E. macularius* of Blyth, the latter, for the sake of distinction, may be called *E. macularius* var. *subunicolor* or *E. subunicolor*,* ac-

* *E. macularius* var. *sub-unicolor* a typo differt dorso, lateribusque parum vel haud maculatis, formâ graciliore, scutis dorsalibus plerumque quinque-carinatis.

cording as the distinction is considered specific or not. For the present I am by no means satisfied that the two forms do not pass into each other too gradually to render it desirable to accord them specific rank, but as one, the smaller more uniformly coloured variety, is typical of the drier climate of the Central Provinces, whilst the more highly coloured form is found in Lower Bengal, and to the eastward, some distinction in name is useful.

In the comparatively dry forests on the Godávári around Dumagudem I met with the var. *subunicolor*, whilst the typical form was obtained nearer to the sea coast in the vicinity of Rájámahendri.

It is easy to understand how naturalists who have seen but few specimens may mistake these scinques for the young of the common and very variable *E. carinatus*. A comparison of the two, however, will shew the difference. The young of *E. carinatus* has but three keels on the dorsal scales, the back is unspotted and there is a well marked pale whitish line from the superciliary region down each side of the back.

The breeding season and colouration are different in *E. carinatus* and *E. macularius*. In the former the breeding season on the Godávári appears to be March. The colouration is probably confined to the male, but I can find no notes on the sexes of the specimens examined. The colour has already been described by me (J. A. S. B., 1870, Pt. 2, p. 357). When most fully developed the lower parts are rich gamboge yellow with a broad scarlet band on each side of the abdomen from shoulder to thigh.

E. macularius breeds in May, and towards the end of that month I captured richly coloured specimens between Dumagudem and Rájámahendri. In these the deepest seasonal tints were on the sides of the neck and breast. A scarlet band covered the lower labials and extended to the upper labials and rostral; it became very broad beneath the ears, and more broken and patchy behind, but it was traceable as far as the thigh. In less fully coloured individuals the red colouration did not extend behind the shoulder. All the lower parts had a slight reddish tinge, but no trace of the bright yellow of *E. carinatus*.

12. *RIOPA ALBOPUNCTATA*.

13. *R. HARDWICKII*. Both these species were obtained on the Godávári, but neither appeared to be very abundant.

14. *HEMIDACTYLUS SUBTRIEDRUS*. See Stoliczka, J. A. S. B., 1872, Pt. 2, p. 93. Near Ellore.

15. *H. MACULATUS*.

16. *H. LESCHENAULTII*. P. A. S. B., 1871, p. 173; Stoliczka, J. A. S. B., 1872, Pt. 2, p. 97.

17. *H. GIGANTEUS*, Stoliczka, J. A. S. B., 1872, Pt. 2, p. 99; Günther, P. Z. S., 1875, p. 223; W. Blanford, P. Z. S., 1876, p. 636.

Of these species of *Hemidactylus* I made over my specimens to Dr. Stoliczka for description. Dr. Günther considers *H. giganteus* a variety of *H. coctai*, but I have shewn that, so far as Indian specimens of the latter are concerned, there are well marked distinctions.

18. *SITANA PONDICERIANA*. The smaller race only. I saw none with the brilliant colours of the gular appendage developed up to the end of May; the colouration being, as has already been noticed, (J. A. S. B., 1870, p. 366,) purely seasonal, at all events in the smaller race.

19. *CALOTES VERSICOLOR*.

20. *CHARASIA BLANFORDIANA*, Stoliczka, J. A. S. B., 1872, p. 110. Without a much better series for comparison than I possess, I am not prepared to say whether this northern form can be distinguished from the southern race with rather smaller scales found in Mysore and further south. Specimens from the neighbourhood of the Godáviri have about 100 scales round the middle of the body. Common on rocks.

21. *CHAMÆLEO CEYLONICUS*. Common.

OPHIDIA.

22. *TYPHLOPS BRAMINUS*. On two occasions I found great numbers of this blind snake in decayed wood; in one case there must have been at least a hundred in one fallen tree. None exceeded $5\frac{1}{2}$ inches in length. No other species of *Typhlops* was observed.

23. *ONYCHOCEPHALUS ACUTUS*.

24. *OLIGODON SUBGRISEUS*? The only important distinction from the description of this species shewn by the single specimen collected consists in the presence of two præoculars instead of one. The following is a description of the snake.

Scales of body smooth, in 15 rows. Ventrals 185, anal divided, subcaudals in 40 pairs. Length $17\frac{3}{4}$ inches, of which the tail was $2\frac{1}{4}$.

Seven upper labials, 3rd and 4th entering the orbit; 2 præ- and 2 post-oculars; a small square loreal.

Colouration, when fresh, light yellowish brown above, with a narrow pale line along the middle of the back from head to tail, and two broader pale lines, each as wide as two scales, down each side from head to anus; below these is a narrow dark line, then pale again. There are rudimentary cross-markings on the back, due to rows of scales with black margins alternating with other rows that are white-edged. On the head the markings are faint, a dark cross-band from eye to eye, edged behind with whitish,

and a double rather broad V-shaped mark, with the angle directed forward, on the vertical and occipitals.

25. *SIMOTES RUSSELLI*. One young specimen only.

26. *ABLABES HUMBERTI*, var. (P. A. S. B., 1871, p. 174). Several specimens were obtained, in the neighbourhood of Ellore, of a small snake, only differing from South Indian specimens of *A. humberti*, in the number of ventral shields. To this variation I called attention in the short paper above indicated. The following is a description of the fresh colouration in the snake from Ellore.

Back pale coppery, sides lilac grey, lower parts very pale apple green; a series of small black dots along the middle of the back, at rather irregular intervals, from 2 to 5 scales apart, and two other lateral rows, one on each side of the ventral scales, consisting of a black dot on the side of each scale. An imperfect very narrow black streak runs down each side of the back. Head above mostly black, with a narrow yellow collar across the neck 7 scales behind the occipitals; this collar becomes broader at the sides. There is a patch of duskier yellow behind each occipital, the two patches separated by a central black line; from each patch a white band leads down to the upper labials. A white band runs along the upper labials and rostral, extending all round the upper jaw, and another runs from the rostral to each superciliary shield. Loreal region black. Each of the lower labials and chin shields with a white patch, bordered by black, anterior ventral shields with partial dusky margins. The specimen described was 10·5 inches long, the tail being 1·9. Ventrals 211, anal bifid, subcaudals in 56 pairs. In another specimen 13¼ inches long there were 209 ventrals. As was pointed out in the note already quoted, there were only 155 ventrals in a specimen from Malabar, 175 in one noticed in Günther's *Reptiles of British India*, p. 228, and no less than 240 in a Calcutta example. So great a variation in the number of ventral shields might indicate that several species are included, but there appeared no other constant difference in the specimens, and I may add that Dr. Stoliczka, who also examined them, agreed with me in classing all as varieties of one species.

27. *ZAMENIS FASCIOLATUS*. A young specimen only, but one of the fiercest snakes I ever captured.

28. *TROPIDONOTUS STOLATUS*.

29. *CERBERUS RHYNCHOPS*, abundant in the salt water inlets and estuaries near Coconada, living in holes in the mud between tidemarks. A very gentle snake, not biting when handled.

30. *DIPSAS TRIGONATA*. The colouration varies in this snake. The specimen obtained had the head markings different from those described by Günther and on the back were irregular transverse whitish bands with

broad black edges; the median line being deficient, as in the specimens from Agra mentioned by Dr. Stoliczka, (J. A. S. B., 1870, p. 142).

31. *GONGYLOPHIS CONICUS*. Two specimens were obtained on the Godávári, they were very gentle and slow in their movements, like *Eryx*. One had swallowed a mouse. In a specimen 20 inches long, of which the tail measured $1\frac{1}{2}$, there were 168 ventral scales and 18 subcaudals; the upper labials were 14, not 12. The colour was dark brown, with the blotches light brown in the middle and yellow on the margins.

32. *DABOIA RUSSELLI*.

33. *ECHIS CARINATA*. This was obtained on two or three occasions in forest,—rather thin forest it is true,—but it is remarkable to find a desert form like *Echis carinata*, so common in the barren plains and rocky hills of South-Western Asia, in a wooded country.

AMPHIBIA.

1. *RANA TIGRINA*.
2. *R. LYMNOCCHARIS*.
3. *R. CYANOPHLYCTIS*.
4. *PYXICEPHALUS BREVICEPS*.
5. *BUFO MELANOSTICTUS*.
6. *POLYPEDATES MACULATUS*.

7. *CALLULA VARIEGATA*, Stoliczka, P. A. S. B., 1872, p. 111. I obtained altogether five specimens of this species, from under logs of wood, near a village between Dumagudem and Rájámahendri. In size they varied from 1.1 to 1.35 in the length of the body, and the hind limb ranged from 1.23 in the smallest to 1.48 in the largest example. Four were under one log, one under another, and in each case the toads associated with a large scorpion, and tried to escape into his burrow when the log was lifted. They can hop but very feebly indeed. The body in life is extremely soft and slimy. The colour above, in the living animal, is dark brown, spotted with pale greenish or yellow, the spots are usually minute on the hinder part of the body and on the limbs, but form larger blotches on the back. The lower parts are dull flesh-colour.
